

that these networks do not exist either as vessels or as lacunæ. Nothing can be more incorrect, for example, than the reticulations figured by M. Blanchard in the interior of the muscles, especially in the muscles of the legs. These muscles are certainly bathed by the blood of the lacunæ, but not a single blood-globule ever penetrates between the fibres of a muscle. It is possible, I readily admit, that in the adult Spiders the circulatory system may be a little more complex than in the young individuals which have not yet undergone their first change; but this increased complication certainly does not go so far as to cause the appearance of reticulations within the organs. Of this we may convince ourselves by the examination of the circulation in the legs of nearly adult *Pholci*. In these limbs it is easy to see that there exists only a single arterial current and a single venous current, without any ramification.

IV.—*Diagnoses of new Forms of Mollusca from the Vancouver District.* By PHILIP P. CARPENTER, B.A., Ph.D.

[Concluded from vol. xiv. p. 429.]

38. ?*Assiminea subrotundata*.

?*A.* testa haud parva, lævi, tenui, fusco-olivacea; anfr. nucl. ?... (decollatis); norm. v., rapide augentibus, subrotundatis; marginibus spiræ rectis, suturis valde impressis; basi rotundata, haud umbilicata; apertura rotundato-ovali, intus fuscescente; peritremate continuo; labro acuto; labio parum calloso; columella arcuata. Long. .28, long. spir. .13, lat. .2, div. 65°.

Hab. Neeah Bay; one specimen among *Lacunæ* (*Swan*).

May prove to be a large *Hydrobia*.

39. ?*Paludinella castanea*.

?*P.* testa compacta, solidiore, fusco-castanea, marginibus spiræ recioribus; rugulosa, lineis distantibus spiralibus irregulariter insculpta; anfr. nucleosis? . . . (detritis), vertice late mamillato; norm. iv., rapidius augentibus, tumidioribus, suturis satis impressis; basi regulariter excurvata, vix rimata; apertura suborbiculari; haud continua; labro acuto; labio supra parietem obsoleto, supra columellam arcuatam intus calloso: operculo, anfr. iv. haud rapide augentibus. Long. .21, long. spir. .09, lat. .17, div. 70°.

Hab. Neeah Bay; one specimen among *Lacunæ* (*Swan*).

May be an aberrant *Assiminea*.

40. *Mangelia crebricostata*.

M. testa tereti, rufo-fusca, albo zonata; anfr. nucl. ? . . . (decollatis); norm. v. elongatis, subrotundatis, suturis impressis; costis radi-

antibus, obtusis, subrectis, circ. xv., spiram ascendentibus; sculptura spirali? . . . (detrita); apertura pyriformi, antrorsum in canalem brevem attenuata; labro postice parum sinuato; labio conspicuo. Long. .54, long. spir. .3, lat. .2, div. 28°.

Hab. Neeah Bay; 1 specimen (*Swan*).

41. *Mangelia interfossa*.

M. testa parva, valde attenuata, rufo-fusca, marginibus spiræ parum excurvatis; anfr. nucl. ii., ut in *Chrysodomo* irregularibus, apice mamillato; norm. vi., parum excurvatis, haud tabulatis, suturis distinctis; costis radiantibus circ. xv., angustis, extantibus; costulis spiralibus circ. xv., quarum circ. v. seu vi. in spira monstrantur, angustis, supra costas transeuntibus, ad intersectiones parum nodulosas; interstitiis altis, quadratis; basi effusa; apertura subpyriformi; labro acuto, postice vix emarginato; labio tenui. Long. .38, long. spir. .22, lat. .13, div. 25°.

Hab. Neeah Bay; very rare (*Swan*).

42. ?*Mangelia tabulata*.

?*M.* testa parva, solidissima, luride rufo-fusca, marginibus spiræ excurvatis; vertice nucleoso chalcedonico (eroso); anfr. norm. v., postice rectangulatim tabulatis, suturis impressis; costis radiantibus circ. xvi., validis, obtusis, circiter basim attenuatam obsoletis; costis spiralibus in spira iii.-iv. angustis, extantibus, supra cost. rad. nodosis; interstitiis alte insculptis, subquadratis; costis circa basim circiter vii., quadratim extantibus, interstitiis a lineis incrementi vix decussatis; canali curta, aperta; labro acutiore, ad angulum posticum vix sinuato; labio tenui; columella obsolete uniplicata. Long. .45, long. spir. .26, lat. .2, div. 35°.

Hab. Neeah Bay; several worn specimens (*Swan*).

The distinct fold near the base of the pillar may require the formation of a new genus.

43. ?*Daphnella effusa*.

?*D.* testa gracillima, maxime effusa, rufo-fusca; anfr. angustis, elongatis, suturis impressis; striis spiralibus crebris a lineis incrementi decussatis ornata; labro tenuiore, postice vix sinuato. Long. .65, long. spir. .45, lat. .22, div. 30°.

Hab. Neeah Bay; one broken specimen (*Swan*).

44. *Odostomia satura*.

O. testa magna, alba, lævi, solidiore, satis elevata; anfr. nucl. ii., angustis, subplanorboideis, valde decliviter sitis, dextrorsum immersis, sinistrorsum extantibus; norm. v., tumidioribus, regulariter convexis, suturis impressis; basi rotundata, tumente, quasi umbilicata; apertura ovata; labro vix sinuato; labio tenui, ap-

presso; plica columellari valida, subantica, parieti haud contigua, transversa. Long. .26, long. spir. .14, lat. .13, div. 40°.

Hab. Neeah Bay; rare (*Swan*).

Var. *pupiformis*: anfr. primis valde depressis, planatis; vertice mamillato; anfr. ult. normali. Specimen unicum, quasi monstruosum. Long. .19, long. spir. .1, lat. .12, div. 45°.

44 b. *Odostomia* (? var.) *Gouldii*.

O. testa solida, alba, ovoidea, marginibus spiræ valde excurvatis; vert. nucl. decliviter immerso; anfr. norm. v., subplanatis, suturis valde impressis; periphæria haud angulata; basi excurvata, haud tumida; apertura ovata, postice parum constricta; labro solido; labio conspicuo, rimam umbilicalem formante; plica submediana, solida, extante, haud declivi. Long. .23, long. spir. .13, lat. .1, div. 30°.

Hab. Neeah Bay; very rare (*Swan*).

Agrees in some respects better with the diagnosis of *O. grævida*, Gould, than do Col. Jewett's shells, from which it is presumed the species was described. These large forms appear very variable.

45. *Odostomia nuciformis*.

O. testa magna, compacta, lævi, solida, alba; anfr. nucl.? . . . (erosis), vertice submamillato; anfr. norm. v., subplanatis, subelongatis; spira brevi, marginibus valde excurvatis; basi elongata, haud umbilicata; apertura subovali, postice angusta; labro solido; labio tenui; plica antica, solida, obtusa, transversa, parietem haud attingente. Long. .3, long. spir. .14, lat. .18, div. 70°.

Hab. Neeah Bay; extremely rare (*Swan*).

45 b. *Odostomia* (? var.) *avellana*.

O. testa *O. nuciformi* indole simili, sed spira valde prolongata. Long. .32, long. spir. .16, lat. .16, div. 50°.

Hab. Neeah Bay; one specimen (*Swan*).

Like a gigantic form of *O. conoidalis*.

47. *Odostomia tenuisculpta*.

O. testa ovoidea, subelevata, albida, tenui, diaphana; anfr. nucl. subverticaliter immersis, angustis; norm. iii., parum tumidis, suturis impressis, sulculis spiralibus latioribus haud impressis, distantibus, in spira iii., circa basim rotundatam circ. vi. subobsoletis; apertura ovata; plica acuta, declivi, parva, parieti contigua; labro acuto; labio indistincto; columella antice parum effusa. Long. .1, long. spir. .04, lat. .06, div. 60°.

Hab. Neeah Bay; one specimen (*Swan*).

48. *Scalaria Indianorum*.

S. testa gracili, turrata, alba; anfr. circ. x., rotundatis, parum separatis, lævibus; basi simplici, haud umbilicata; costis viii.—xv. (plerumque xii.), acutioribus, subreflexis, interdum latis, plerumque lineis irregularibus margini spiræ recto parallelis ascendentibus, rarius juxta suturam subnodosis; apertura ovata. Long. 1.05, long. spir. .8, lat. .36, div. 28°.

Hab. Neeah Bay (*Swan*).

Strung as ornaments by the Indian children. Intermediate between *S. communis* and *S. Turtonis*, and scarcely differs from "*S. Georgettina*, Kien.," Mus. Cum. no. 34, Brazil.

48 b. *Scalaria* (? *Indianorum*, var.) *tincta*,

S. ?Indianorum costis acutis, haud reflexis; anfractibus postice fusco-purpureo tinctis.

Hab. Cerros Island (*Ayres*); S. Pedro (*Cooper*).

The Lower-Californian shell may prove distinct. It is like *S. regularis*, Cpr., but without the spiral sculpture.

Subgenus OPALIA, H. & A. Ad. (diagn. auct.).

Scalariae varicibus obtusis, irregularibus, parum definitis: sculptura basim versus interrupta.

Ex. in Mus. Cum.:—*O. crassicostata*, *O. crassilabrum*, *O. diadema*, *O. funiculata*, *O. crenata*, *O. granulosa*, *O. australis*, *O. bicarinata*, *O. attenuata*, Pse., *O. M'Andreae*, Fbs., sp. ined. (West Indies). Other West-coast species are *O. crenatoides* and var. *insculpta*, *O. spongiosa*, and *O. retiporosa*.

The species of this very natural group were arranged by Messrs. Adams partly under *Opalia* and partly under *Cirsotrema*.

49. *Opalia borealis*, Gld.

O. testa O. australi simillima, valde elongata; anfr. xii., planatis, suturis parum impressis; testa jun. costis validissimis viii. latis, rotundatis, peripheriam attingentibus, interdum interruptis; testa adulta sæpius obsoletis, ad peripheriam evanidis; circa basim totam usque ad peripheriam angulatam lamina spirali, planata; apertura ovali; tota superficie minutissime spiraliter striolata: operculo paucispirali, nucleo ad trientem longitudinis sito, lineis incrementi validis. Long. 1.7, long. spir. 1.3, lat. .53, div. 20°.

Hab. Puget Sound (*U. S. Expl. Exp.*); Neeah Bay and Tatoche Island (*Swan*).

This species was doubtfully indicated, not described, by Dr. Gould, in the 'E. E. Moll.' p. 207. It appears to be exactly iden-

tical with "*crassicostata*, Australia," in Brit. Mus., and is nearly related to *Ochotensis*, Midd. It must not be confounded with *Acirsa borealis*, Beck. One young specimen has the ten ribs of *O. australis*.

50. *Cerithiopsis munita*.

C. testa C. purpureæ simili, sed angustiore, marginibus spiræ fere rectis; costis spiralibus magis expressis, testa adulta minus nodulosis; basi æqualiter lirulata. Long. .34, long. spir. .24, lat. .11, div. 20°.

Hab. Neeah Bay; common (*Swan*).

51. *Cerithiopsis columna*.

C. testa majore, valde elongata, purpureo-fusca; anfr. norm. ix., planatis, suturis distinctis; seriebus iii. nodulorum spiralibus valde appressorum, creberrimorum, interstitiis parvis, altis; aliis interdum intercalantibus; lira quarta supra suturam haud valde nodulosa, liris duabus haud expressis aream suturalem circumcumeuntibus; basi planata, haud sculpta, ad peripheriam obtuse angulata; apertura quadrata. Long. .38, long. spir. .32, lat. .1, div. 10°.

Hab. Neeah Bay; several worn specimens (*Swan*): Monterey; rolled fragment of larger shell (*Cooper*).

Easily recognized, even in portions, by the "strung-fig" pattern.

55. *Cancellaria modesta*.

C. testa elata, subrufa, trichotropiformi, marginibus spiræ rectis; anfr. norm. v., rotundatis, postice subtabulatis, suturis impressis; costis spiralibus obtusis, distantibus, in spira circ. iv., circa basim prolongatam circ. vii., aliis minoribus interdum intercalantibus; interstitiis secundum incrementa, decussatis; apertura subquadrata; columella plicis duabus declivibus anticis et costulis basalibus ornata; labio nullo. Long. .68, long. spir. .34, lat. .34, div. 50°.

Hab. Neeah Bay; one specimen and fragment (*Swan*).

56. *Velutina prolongata*.

V. testa majore, subplanata, tenuiore, carnea, spira minima; anfr. iii. et dimidio, rapidissime augmentibus; vertice vix conspicuo; anfr. ult. antice valde porrecto; regione columellari incurvata; labio valido; axi haud rimata; epidermide tenui, rugis incrementi ornata, spiraliter haud striata. Long. .1, long. spir. .15, lat. .95, div. 140°.

Hab. Neeah Bay; rare (*Swan*).